



US 20040119332A1

(19) **United States**(12) **Patent Application Publication** (10) **Pub. No.: US 2004/0119332 A1**
Marsh et al. (43) **Pub. Date: Jun. 24, 2004**(54) **SPRING BRAKE MODULATING RELAY VALVE****Publication Classification**(51) **Int. Cl.⁷** **B60T 13/00; B60T 15/04**(52) **U.S. Cl.** **303/40; 303/7; 303/122; 137/512.5; 137/82**(76) **Inventors:** **Andrew Marsh**, Elyria, OH (US); **John Kemer**, Avon Lake, OH (US); **Charles Eberling**, Wellington, OH (US); **Dave Knight**, Avon Lake, OH (US); **Richard T. Ross**, Wakeman, OH (US)(57) **ABSTRACT**

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A combined spring brake modulating relay valve integrates the functions of a relay valve and a modulating valve. The housing includes a valve assembly movable in response to air pressure provided to selected ports in the housing. A relay piston selectively communicates with a control port and a primary brake circuit port. A modulating piston includes surfaces selectively pressurized by the primary brake circuit port and a secondary brake circuit port. This modulates the pressure from the delivery port to thereby selectively apply the associated spring brakes if a failure is detected at the primary brake circuit port. The exhaust member selectively controls communication between the supply and delivery ports as necessary.

(21) **Appl. No.:** **10/646,349**(22) **Filed:** **Aug. 22, 2003****Related U.S. Application Data**

(63) Continuation-in-part of application No. 09/579,086, filed on May 25, 2000.

SR-6**Spring Brake Modulating / Relay Valve****Operation: System Charging < 105 psi**